

**What is claimed is:**

1. A program used to direct a computer to use a knowledge processing method for use with a knowledge processing system formed by a structure of knowledge relating to a designed event based on a class and a relationship between classes, comprising:

storing in a database a super class having a name inclusively describing a class of the knowledge, the class, and the relationship between the classes; and

detecting a class relating to a super class stored in the database, generating a relationship between the classes by an inference based on multivalued logic, and configuring a knowledge structure from information stored in the database and the relationship between the classes obtained by the inference.

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2. The program according to claim 1, wherein the relationship between the classes includes a weight which weights a relationship between classes obtained by the inference based on the multivalued logic and a hierarchical structure.

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3. The program according to claim 1, wherein  
in the inferring step, a new class is  
generated when the new class can be generated to  
5 associate classes by the inference, and is  
associated with another class so that knowledge can  
be structured.
4. The program according to claim 1, wherein  
10 in the inferring step, a temporal inference on  
a knowledge structure described in a class group is  
conducted and a relationship between classes with a  
change with time of described knowledge taken into  
account is included in the knowledge structure.
- 15 5. The program according to claim 1, wherein  
on a part of a user who uses the knowledge  
structure generated on a part of a designer, a  
knowledge structure designed on the part of the  
20 designer is restructured by an inference using  
multivalued logic according to information about a  
super class describing the knowledge structure and  
a class group.
- 25 6. A knowledge processing method for use with a

knowledge processing system formed by a structure of knowledge relating to a designed event based on a class and a relationship between classes, comprising:

5           storing in a database a super class having a name inclusively describing a class of the knowledge, the class, and the relationship between the classes; and

          detecting a class relating to a super class  
10       stored in the database, generating a relationship between the classes by an inference based on multivalued logic, and configuring a knowledge structure from information stored in the database and the relationship between the classes obtained  
15       by the inference.

7.       The method according to claim 6, wherein  
          the relationship between the classes includes a weight which weights a relationship between  
20       classes obtained by the inference based on the multivalued logic and a hierarchical structure.

8.       The method according to claim 6, wherein  
          in the inferring step, a new class is  
25       generated when the new class can be generated to

associate classes by the inference, and is associated with another class so that knowledge can be structured.

5        9.        The method according to claim 6, wherein  
                 in the inferring step, a temporal inference on  
                 a knowledge structure described in a class group is  
                 conducted and a relationship between classes with a  
                 change with time of described knowledge taken into  
10          account is included in the knowledge structure.

                 10.        The method according to claim 6, wherein  
                 on a part of a user who uses the knowledge  
                 structure generated on a part of a designer, a  
15          knowledge structure designed on the part of the  
                 designer is restructured by an inference using  
                 multivalued logic according to information about a  
                 super class describing the knowledge structure and  
                 a class group.

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                 11.        A knowledge processing system formed by a  
                 structure of knowledge relating to a designed event  
                 based on a class and a relationship between classes,  
                 comprising:

25                   a storage unit storing in a database a super

class having a name inclusively describing a class of the knowledge, the class, and the relationship between the classes; and

5 a inference unit detecting a class relating to a super class stored in the database, generating a relationship between the classes by a inference based on multivalued logic, and configuring a knowledge structure from information stored in the database and the relationship between the classes  
10 obtained by the inference.

12. The system according to claim 11, wherein the relationship between the classes includes a weight which weights a relationship between  
15 classes obtained by the inference based on the multivalued logic and a hierarchical structure.

13. The system according to claim 11, wherein in the inference unit, a new class is  
20 generated when the new class can be generated to associate classes by the inference, and is associated with another class so that knowledge can be structured.

25 14. The system according to claim 11, wherein

in the inference unit, a temporal inference on  
a knowledge structure described in a class group is  
conducted and a relationship between classes with a  
change with time of described knowledge taken into  
5 account is included in the knowledge structure.

15. The system according to claim 11, wherein  
on a part of a user who uses the knowledge  
structure generated on a part of a designer, a  
10 knowledge structure designed on the part of the  
designer is restructured by an inference using  
multivalued logic according to information about a  
super class describing the knowledge structure and  
a class group.

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